



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/004,504

10/26/2001

Yi-Ren Woo

1416.03US01

4675

27367

7590

06/23/2006

WESTMAN CHAMPLIN & KELLY, P.A.  
SUITE 1400  
900 SECOND AVENUE SOUTH  
MINNEAPOLIS, MN 55402-3319

EXAMINER

SWEET, THOMAS

ART UNIT

PAPER NUMBER

3738

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/004,504

Applicant(s)

WOO ET AL.

Examiner

Thomas J. Sweet

Art Unit

3738

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19, 22, 23 and 40-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 40-55 is/are rejected.
- 7) ☒ Claim(s) 22 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments, see the remarks, page 7, filed 4/24/2006, with respect to the rejection under 35 USC 112(1) have been fully considered and are persuasive. The rejection of claims 1-20, 22-23 and 40-55 under 35 USC 112(1) has been withdrawn.

Applicant's arguments, see the remarks, page 8, filed 4/24/2006, with respect to the rejection under 35 USC 102(b) as anticipated by Solovay have been fully considered and are persuasive. The rejection of claims 40-45 and 48-54 under 35 USC 102(b) as anticipated by Solovay has been withdrawn.

Applicant's arguments, see the remarks, page 8, filed 4/24/2006, with respect to the rejection(s) of claim(s) 1-11, 14-15, 18-21, 40-45 and 47-54 under 35 USC 102(b) as anticipated by Dayton as rejected have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Dayton and Alt in view of Dayton.

Applicant's arguments, see the remarks, page 8, filed 4/24/2006, with respect to the rejection(s) of claim(s) 12-13, 46 and 55 under 35 USC 103(a) in view of Dayton in view of Steinke et al as rejected have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Dayton in view of Steinke et al and Alt in view of Steinke et al.

Applicant's arguments filed 4/24/2006 have been fully considered but they are not persuasive. With respect to the rejection of claims 1-11, 15-19, 40-45 and 48-54 under 35 USC 102(b) as anticipated by Alt, regardless of whether there are two layer, both are metal, one of

Art Unit: 3738

which is porous, so combined or the porous layer alone are rigid materials (i.e. metal), Alt has pores formed in the rigid material which consists of metals. The pores extend through the rigid material as previously rejected (i.e. not through the thickness but can traverse the porous section from surface to surface).

### ***Claim Objections***

Claims 1-19, 22-23, 40-55 are objected to because of the following informalities:

Independent claims 1, 40 and 49, are in improper Markush form, since the word “comprising” is used in a list of alternatives. The Examiner suggests using the Markush form of “selected from the group consisting of” A, B, C “and” D. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11, 15-19, 40-45, 48-54 are rejected under 35 U.S.C. 102(b) as being anticipated by Alt (US 6099561). Alt discloses an implantable prosthesis (fig. 1A, embodiment ‘053) comprising a rigid material (metal) with pores (col 5 line 19), wherein the rigid material is selected from the group consisting of metals (both layers are metal including the porous layer), wherein a filler comprising a bioactive agent (drugs, col 5, line 23) thereof, is located within the pores, wherein said rigid porous material with the filler presents a smoother surface for fluid flow than pores without filler (this is inherent since a filled pore presents less surface roughness).

Art Unit: 3738

With regard to claims 3, 43 and 52, as presented in claim 1 the filler presents a smooth surfaces to flow as compared to unfilled.

With regard to claim 4, filled pores are partly filled pores.

With regard to claims 5-8, 10, 18-19, 44 and 53, these claims are non-elected since Alt meets the Markush grouping of claim 1 by including a bioactive agent.

With regard to claims 11, 15, 45, 48 and 54, anti-thrombotic (col 5, line 33) is an anticoagulant.

With regard to claims 16-17, Alt's surface includes of bonded metal spheres which would present pores having interconnecting porosity and since the pores are interconnected, the pores therefore extend through the rigid material (i.e. not through the thickness of the rigid material, but can traverse from a surface to surface).

With regard to claim 50, See column 3 lines 54-61

Claims 1-11, 14-15, 18-19 and 40-45 and 47-54 are rejected under 35 U.S.C. 102(b) as being anticipated by Dayton (US 5578075). Dayton discloses an implantable prosthesis (title) comprising a rigid material (11, rigid since the stent must hold open the vessel) with pores (17 or porous network in a wire mesh col 7-8, line 56-8), wherein the rigid material is selected from the group consisting of metals (11 and wire are metal), wherein a filler comprising a bioactive agent (claim 1) and polymer (comprising does not exclude other materials), is located within the pores (the entire surface is coated including 17, the pores can be covered by the filler/coating col 7-8, lines 56-21), wherein said rigid porous material with the filler presents a smoother coated surface

Art Unit: 3738

for fluid flow than pores without filler (this is inherent since a coating covers up sharp edges and surface irregularities and in the case of the pores being covered presents less surface roughness).

With regard to claims 3, 43 and 52, as presented in claim 1 the filler presents a smooth surfaces to flow as compared to unfilled.

With regard to claim 4, coating partly filled pores (17 when merely coated).

With regard to claims 5-8, 10, 18-19, 44 and 53, these claims are non-elected since Dayton meets the Markush grouping of claims 1, 40 and 49 by including a bioactive agent.

With regard to claims 11, 15, 45, 48 and 54, heparin (col 7, line 24) is an anticoagulant.

With regard to claims 14 and 47, Dayton discloses the use of antibodies (col 7, lines 24-30) which are disclosed in the present application as a progenitor attraction compound.

With regard to claim 50, See column 8 lines 1-8

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-13, 46 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dayton in view of Steinke et al (US 6033436). Dayton discloses an implantable prosthesis as discussed above. However, Dayton does not specifically disclose the use VEGF. Steinke et al discloses another implantable prosthesis using VEGF (col 9 lines 57-58) as a bioactive agent to promote angiogenic response. It would have been obvious to one of ordinary skill in the art at the

Art Unit: 3738

time the invention was made to use VEGF as taught by Steinke et al in the implantable prosthesis as disclosed by Dayton in order to promote angiogenic response.

Claims 12-13, 46 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alt in view of Steinke et al. Alt discloses an implantable prosthesis as discussed above. However, Alt does not specifically disclose the use VEGF. Steinke et al discloses another implantable prosthesis using VEGF (col 9 lines 57-58) as a bioactive agent to promote angiogenic response. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use VEGF as taught by Steinke et al in the implantable prosthesis as disclosed by Alt in order to promote angiogenic response.

Claim 14 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alt in view of Dayton. Alt discloses an implantable prosthesis as discussed above. However, Alt remains silent as to the use of a progenitor attraction compound. Dayton discloses another implantable prosthesis using antibodies (col 7, lines 24-30) for so treating the patient, which are disclosed in the present application as a progenitor attraction compound. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use antibodies as taught by Dayton in the bioactive agent of Alt in order to so treat the patient.

#### ***Allowable Subject Matter***

Claims 22-23 are objected to as being dependent upon a rejected and objected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Art Unit: 3738

This is a RCE of applicant's earlier Application. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application.

Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case.

See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

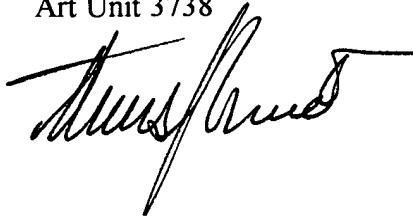
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Sweet whose telephone number is 571-272-4761. The examiner can normally be reached on 6:30 am - 5:00pm, M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine M. McDermott can be reached on 571-272-4754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thomas J Sweet  
Examiner  
Art Unit 3738

A handwritten signature in black ink, appearing to read 'Thomas J Sweet', with a stylized flourish at the end.